Digital learning and ICT in education

The European Commission is aiming to modernise education and training by funding research and innovation and promoting digital technologies used for learning.

The action plan on digital learning

The Digital Education Action Plan (2021-2027) is a European Union (EU) policy initiative to support the sustainable and effective adaptation of the education and training systems of EU Member States to the digital age.

To achieve its objectives, the Action Plan sets out 13 actions in 2 priority areas:

1. Fostering the development of a high-performing digital education ecosystem;
2. Enhancing digital skills and competences for the digital transformation.

Under priority 1, action 6, an expert group has been tasked with the development of ethical guidelines on artificial intelligence and data usage in education and training based on the Ethics Guidelines for Trustworthy Artificial Intelligence, presented by the High-Level Expert Group on AI in 2019.

Under priority 2, action 7, an expert group has been tasked with developing common guidelines for teachers and educators to foster digital literacy and tackle disinformation through education and training.

The guidelines are expected to be ready in September 2022.

The European Commission has also adopted in 2017 a Communication on strengthening European identity through education and culture. This Communication was the Commission's contribution to the leaders' meeting on education and culture at the Gothenburg summit. Some actions have to be adopted by 2025.

Funding Research and Innovation for Digital Learning

The European Commission funds many activities on research and innovation for digital learning under several programmes, including Horizon Europe and Digital Europea Programme, as also the precedent programmes Horizon 2020, the seventh Framework Programme (FP7) and the Competitiveness and Innovation Framework Programme (CIP).

Under the Horizon Europe and Digital Europe Programmes, the following calls are planned:

- eXtended Reality Learning — Engage and Interact (TOPIC ID: HORIZON-CL4-2022-HUMAN-01-19), opening date: 21 December 2021;

- Calls under the Digital Europe Programme work programme for 2021-22 includes preparatory actions for the data space for skills open between 17/11/2021-22/02/2022.

The following areas were covered under Horizon 2020:

- Mentoring scheme for schools: mainstreaming innovation by spreading the advanced ICT-based teaching practices to a wide circle of schools (DT-TRANSFORMATIONS-21-2020);an empowering, inclusive next generation Internet (ICT-2019-30);
- International partnership building in low and middle income countries (ICT-39-2016-2017);
- technologies for learning and skills (ICT-22-2016);
- technologies for better human learning and teaching (ICT 20 – 2015);
- advanced digital gaming/gamification technologies (ICT 21- 2014).

Following the initiative of the European Parliament, the Commission co-finances pilot project and preparatory actions, the ongoing action are:

- preparatory action — Increasing access to educational tools in areas and communities with low connectivity or access to technologies (PPPA-2021-RemoteDigEdu);
- pilot project call — Girls 4 STEM in Europe (Girls4STEM-2019) and the selected project GEM — Empower Girls to Embrace their Digital and Entrepreneurial Potential.

Digitisation of schools

The Commission carried out a second survey of schools: ICT in education in 2019. The survey had 2 objectives:

1. benchmark progress in ICT in schools;
2. define a model for a highly equipped and connected classroom.

The survey was carried out in 31 countries (EU27 + UK, Norway, Iceland and Turkey). It provides detailed and reliable benchmarking on the use of ICT in school education across Europe, and infrastructure provision, use, confidence and attitudes.

The European Commission also published a study on satellite-based broadband services in schools. The study showed that in 2015, an estimated 18% of EU primary and secondary schools were not connected to broadband. The study concluded that the satellite broadband could be an efficient option for poorly connected schools. It also suggested that a voucher scheme could be used as a tool to close the broadband gap for schools.

Communication on the Digital Education Action Plan

Communication "Resetting education and training for the digital age"

Communication on Strengthening European identity through education and culture

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New report looks at AI national strategies progress
and future steps

This week the European Commission published a
new report that takes stock of national strategies
on Artificial Intelligence and provides suggestions
for future developments.

PRESS RELEASE | 04 January 2021
Commission sets up a Centre for digital preservation of cultural heritage and launches projects supporting digital innovation in schools

The Commission launched this week a European competence centre aiming to preserve and conserve European Cultural Heritage. The centre, which will work for a period of three years, has been granted up to €3 million from the Horizon 2020 programme. It will set up a collaborative digital space for cultural heritage conservation and give access to repositories of data, metadata, standards and guidelines.

PRESS RELEASE | 08 December 2020
Digital economy: scoreboard shows women in Europe are less likely to work or be skilled in ICT

The Commission has published the 2020 Women in Digital Scoreboard. Women have spearheaded innovation essential to the advancement of digital technology – from computer algorithms to programming. Yet, they are still less likely to have specialist digital skills and work in this field compared to men. Only when looking at the basic digital skills, the gender gap has narrowed, from 10.5% in 2015 to 7.7% in 2019.

PRESS RELEASE | 30 September 2020
Achieving a European Education Area by 2025 and resetting education and training for the digital age

The Commission has adopted two initiatives that will strengthen the contribution of education and training to the EU's recovery from the coronavirus crisis, and help build a green and digital Europe.

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Big Picture

Digital skills and jobs

The European Commission is determined to tackle the digital skills gap and promote projects and strategies to improve the level of digital skills in Europe.

See Also

Digital skills initiatives

The Digital Skills and Jobs Coalition and other initiatives promote excellence in digital skills across different organisations, areas and countries.